FLUID RESUSCITATION – PLASMA-LYTE A VS 0.9% NORMAL SALINE FOR LAPAROTOMY IN ACUTE GASTROINTESTINAL PERFORATION – A RANDOMISED DOUBLE BLINDED CONTROLLED STUDY

ABSTRACT

BACKGROUND/AIM: Comparison of efficacy of Plasma-Lyte A vs 0.9% Normal saline as the choice of fluid for resuscitation of patients suffering from acute gastrointestinal perforation scheduled for emergency laparotomy.

METHODS: Randomized, double-blinded, controlled study conducted wherein 60 patients between age group of 18-60 yrs scheduled for emergency laparotomy following acute gastrointestinal perforation were randomly allocated into two groups to receive either Plasma-Lyte A or 0.9% Normal saline as the sole resuscitation fluid on admission, pre operative, intra and post-operative period. Primary outcome was measure of base deficit variation over 24 hours. Secondary outcome involved variations in pH, serum electrolytes, urine output, hemodynamic monitoring and resource utilisation.

RESULTS: At baseline both groups were comparable. The normalisation of base deficit and pH maintenance was found to be more rapid and efficient in Plasma-Lyte A group and the difference on comparison with Normal saline group was statistically significant. Normal saline group had higher levels of sodium and chloride ions, with lower levels of bicarbonate ions and urine output. Hemodynamic parameters, potassium and calcium ion concentrations were comparable in both intervention groups. Resource utilisation was higher with normal saline resuscitation.

CONCLUSION: On comparison with 0.9% Normal saline, Plasma-Lyte A was associated with a better metabolic profile in resuscitation of patients scheduled for emergency laparotomy following acute gastrointestinal perforation.

KEY WORDS: Plasma-Lyte A, resuscitation, base deficit, emergency laparotomy